RULES AND TABLES FOR COMPUTING BULLION VALUES

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h the Compliments of

Horatio Q. Burchard,

Director of the Mint.

TABLES AND METHODS

FOR ASCERTAINING

THE WEIGHT AND THE COINAGE VALUE

OF

GOLD AND SILVER,

AND THE

OUNCES AT STANDARD FINENESS

CONTAINED, IN

BULLION FROM .0001 TO 1.000 FINE.

PREPARED BY

HORATIO C. BURCHARD,

DIRECTOR OF THE MINT,

FOR THE USE OF THE MINTS AND ASSAY OFFICES.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1885.

Gold, Weight.

Value, .000 ± .100

 $\frac{22}{27} \frac{36}{30}$

42 4

57 <u>50</u>

7 7(72 7) 7 8(

TREASURY DEPARTMENT, DOCUMENT NO. 680, BUREAU OF THE MINT.

PREFACE.

The number of deposits of gold and silver, including purchased silver, at the mints and assay offices of the United States during the year 1884, aggregated 40,000, each of which, with few exceptions, involved at least three, and sometimes four, arithmetical processes to find the weight and the value either of the gold or of the silver contained, and required in addition an equal number of calculations to check the results.

It seemed to me, therefore, desirable to shorten the labor, if possible, by arranging a series of computations in tabular form by the use of which, the weight at standard fineness of the gold or silver contained in deposits of any weight or fineness, and also the value of the gold, could be readily ascertained. Accordingly I caused such tables to be prepared for use in my office in testing the accuracy of the computations of the value and weight of gold and silver appearing in the accounts of the mints and assay offices.

It was found that the computations of the value of gold bullion were greatly expedited and rendered less fatiguing and that even the ascertainment of standard from "fine" weight was more easily and to some extent more rapidly effected. This is especially the case if the tables are used in connection with an "adding machine" carrying forward and exhibiting or recording the resulting additions, and dispensing with the necessity of writing down any figures in checking previous computations.

In deciding to print these tables in book form, after careful revision, for use in my office, it seemed advisable to print a limited number of additional copies to supply the officers and clerks in the mints and assay offices and other officials having occasion to make computations of the value of bullion.

Washington, January 20, 1885.

HORATIO C. BURCHARD.

(3)

Gold

Weight.

Value

.000

.10

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METHODS OF COMPUTATION.

I.

To ascertain the weight in troy ounces 1.000 fine of a given value of gold.

BY TABLE I.

The weight in ounces and decimals of an ounce 1.000 fine, for any number of thousand dollars from 1 to 99, is entered in ounces and thousandths of an ounce in the first column of weight headed with O, opposite to the number of thousands of dollars in the marginal columns of value. If the value is hundreds, as well as tens or units of thousands of dollars, the weight is found under the proper "hundred" column, and opposite to the figures in the marginal columns representing the tens and units of thousands of dollars value.

The weight of less than a thousand dollars is found in the same manner, omitting for dollars and tens and hundreds of dollars the last three figures and for cents the last five figures, and adding one to the last figure retained when the figures dropped exceed .5.

Example: $$786,952.42 \pm \\$ $$786,000.00 \pm \text{ozs.} 38,022.750$ $952.00 \pm \\$ 46.053 $.42 \pm$

38,068.823 ounces.

ARITHMETICAL METHODS.

By Multiplication and Division.—As a gold dollar contains 23.22 grains of pure gold $\equiv \frac{23.22}{480} \equiv \frac{387}{8000}$ of a troy ounce, the weight in ounces 1.000 fine of a given value of gold may be found by multiplying the number expressing the value by 387 and dividing by 8,000.

Example: \$786,952.42.

8,000) 304,550,586.54

38,068.823 ounces.

By Multiplication.—As $\frac{387}{8000}$ = decimal .048375, multiply the number expressing the value by .048375.

Example: \$786,952.42 \pm 786,952.42 \times .048375 \pm 38,068.823 ounces.

Short Method.—Take $\frac{9}{10}$ of the weight in ounces .900 fine ascertained by the method given under II, i. e., take $\frac{9}{10}$ of $(\frac{1}{20} + \frac{11}{20 \times 20})$ of the number expressing the value.

Gold.

Weight.

Value.

.000

Example: \$786,952.42.

20) 786952.42 20) 39347.621 2) 1967.381 983.690 42,298.692 .9

II.

38,068.823 ounces.

To ascertain the weight in troy ounces .900 fine of a given value of gold

BY TABLE II.

The weight in troy ounces and thousandths of an ounce .900 fine of a given value of gold is found in the same manner by Table II as for ounces 1.000 fine by Table I. That is, the weight of any value from 1 cent to \$999,999. is found by adding the figures entered in the proper "hundred" column opposite to the tens and units in the marginal columns representing the given value, omitting the last three figures for dollars, tens, and hundreds of dollars, and omitting the last five figures for cents, increasing the last figure retained by one if the figures omitted exceed .5.

Example: \$476,580.35 =

 $$476,000.00 \pm \text{ozs.} \ 25,585.000$ 580.00 ± 31.175 $.35 \pm .018$

25,616.193 ounces

ARITHMETICAL METHODS.

By Multiplication and Division.—As the legal weight of a gold dollar is 25.8 grains of gold at standard fineness $=\frac{25.8}{480} = \frac{43}{800}$ of an ounce troy, the weight will be $\frac{43}{800}$ of the value. Hence, to find the weight in troy ounces .900 fine of a given value of gold, multiply the latter by 43 and divide by 800.

Example: \$476,580.35.

476,580.35 43 142974105

190632140

800) 2049295505

25,616.193 ounces.

By Multiplication.—As $\frac{43}{800}$ = decimal .05375, multiply the given value by the decimal .05375.

Example: \$476,580.35.

 $476,580.35 \times .05375 = 25,616.193$

By Division.—As $_{800}^{43} = _{800}^{40} + _{800}^{2} + _{800}^{1} = _{800}^{1} = _{20}^{1} + _{20 \times 20}^{1}$ $+\frac{1}{20\times20}$, divide the given value by 20, that quotient by 20, and the last quotient by 2, and add the quotients, the sum will be the weight of the gold in troy ounces .900 fine.

Example: \$476,580.35.

20)476,580.35

20) 23,829.0175 2) 1,191.4508

595.7254

25,616.193 ounces.

III.

To find the value of a given weight of gold from .0001 to .9991 fine.

BY TABLE III.

The value of any number of hundred ounces from 10 to 99 is given in Table III for each half thousandth from $.000\frac{1}{2}$ to .010 and from .100 to .999½. For hundreds of ounces less than 10 the value is found by taking $\frac{1}{10}$ of the value expressed for tens of hundreds of ounces.

For a weight less than 100 ounces find the value in the same manner, moving the decimal point for cents to the left two figures for ounces and four figures for hundredths of an ounce, adding one cent if the figures dropped exceed .5. Add the several values found in this manner in the column headed with the given fineness for the numbers

representing the total weight and their sum wireds" colu be its value ens and u

When the fineness is between .010 and .100, there ounces value is found by taking $\frac{1}{10}$ of the value obtaine indths of from the column of fineness ten times greate man than the given fineness; that is, for the value oint for co gold .056 $\frac{1}{2}$ fine, take $\frac{1}{10}$ of the value as given under the solution of the value as given under the solution of the fineness .565.

Example: To find the value of ounces .205 fine.

> 2,800 ounces = \$11,865.6340 " 0.60 " 254 12,007:68

ARITHMETICAL METHODS.

By Multiplication, Division, and Addition.—A the value of an ounce of gold 1.000 fine = dollars $=\frac{800000}{387}$ cents its value .001 fine will be $\frac{8}{3}$ cents $= 2\frac{26}{387}$ cents $= (2 + \frac{2}{30} + \frac{2}{30 \times 129})$ cents), there **By Mult** fore, the value in cents of a given weight of golof the pure of any fineness may be found by multiplying the he value, i number of ounces by double the fineness and addin number of to the product $\frac{1}{30}$ and $\frac{1}{129}$ of $\frac{1}{30}$ of the product.

Note.—As $\frac{2}{129} = (\frac{2}{130} + \frac{2}{129 \times 130})$, instead of divide ing by 129 the quotient of the division by 3 may be divided by 130 and that quotient by 130, and so on until the quotient obtained would be less than one half cent.

Example: To find the value of 2,840.60 ounces of gold 205 thousandths fine

> 2840.60 410 2840600 1136240 30) 11646.4600 130) 388.21533 2.98627 130) .023 \$12,037.68

IV.

To find the value of a given weight of gold 1.000 fine.

BY TABLE IV.

The value in dollars and cents for any number of thousand ounces from 1 to 99 is stated in dollars and cents in the first column of weight headed with 0. For a number consisting of hundreds, tens, and units of thousand ounces, the value in dollars and cents is found in the proper "hun-

When th housandthe

2,840.6 otal value

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Hence,

Examoun

55,

By Mul the value $=$20^{26}_{387}$ of a given by multiply adding to

NOTE.the quotien quotient n obtained would giv The sum in dollars

Exam

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00, the tained reater lue of

340.60

under

= 8000 387 be 800

heregold g the dding

lividy 30 t by vould

40.60

.000

doladed reds, ie in hundreds" column and opposite to the number of tens and units in the marginal column of value. For ounces less than one thousand and for thousandths of an ounce, the value is found in the same manner, removing for ounces the decimal point for cents three places to the left, and for thousandths of an ounce six places.

When the given weight consists of ounces and thousandths, or thousand ounces, to obtain the total value their several values must be added.

Example: To find the value of 55,475.800 ounces of gold 1.000 fine.

$$\begin{array}{r}
55,000 & = \$1,136,950.90 \\
475 & = 9,819.12 \\
.800 & = 16.54 \\
\hline
& \$1,146,786.56
\end{array}$$

ARITHMETICAL METHODS.

By Multiplication and Division.—As the weight of the pure gold in one dollar is $\frac{387}{8000}$ of an ounce, the value, in dollars, of an ounce will be $\frac{8000}{387}$ of the number of ounces.

Hence, multiply the number of ounces by 8000 and divide by 387.

Example: To find the value of 55,475.800 ounces 1.000 fine.

$$55,475.800 \times \frac{8000}{387} = \$1,146,786.56$$

By Multiplication, Addition and Division.—As the value of an ounce of gold 1.000 fine is $_{387}^{8000}$ = \$20 $_{387}^{260}$, and $_{387}^{260}$ = $_{387}^{258+2}$ = $_{3}^{2}$ + $_{3\times129}^{2}$, the value of a given weight of gold 1.000 fine may be found by multiplying the number of ounces by 20, and adding to the product $\frac{1}{30}$ and $\frac{1}{129}$ of $\frac{1}{30}$ of the product.

Note.—As $\frac{1}{129} = \frac{1}{130} + \frac{1}{120 \times 130}$, instead of dividing the quotient of the division by 30 by 129, this quotient may be divided by 130, and the quotient obtained by 130, and so on, until the division would give a quotient less than one half cent. The sum of these numbers will give the value in dollars and decimals of a dollar.

Example: 55,475.800 ounces.

	55,475.800 20
-	
30)	1,109,516.000
130)	36,983.866
130)	284.491
130)	2.188
	.016
\$	1 146 786 56

To find the value of a given weight of gold .900 fine.

BY TABLE V.

The value in dollars and cents is found from Table V in the same manner as directed for Table IV.

Example: 278,351.468 ounces of gold .900

$$\begin{array}{rcl}
278,000 & = \$5,172,093.02 \\
351 & = 6,530.23 \\
.468 & = 8.71 \\
\hline
\$5,178,631.96
\end{array}$$

ARITHMETICAL METHODS.

By Multiplication and Division.—As the legal weight of a gold dollar is 25.8 grains .900 fine $=\frac{25.8}{480}$ $=\frac{43}{800}$ of a troy ounce, the value of an ounce of gold .900 fine will be $\frac{800}{43}$ dollars.

Gol

Weig

Val

.00

12

17

 $\frac{32}{37}$ $\frac{42}{42}$

Example: 278,351.468 ounces.

$$278,351.468 \times \frac{800}{43} = \$5,178,631.96$$

By Multiplication.—As the value of one ounce of gold .900 fine is $\frac{800}{43}$ = \$18.60465116+, the value of a given weight of gold .900 fine may be found by multiplying the value of one ounce by the number of ounces.

Example: 278,351.468 ounces.

 $$18.60465116+\times 278,351.468 = $5,178,631.96$

To find the weight in troy ounces 1.000 fine of a given value of silver, at the standard dollar coining rate.

BY TABLE VI.

The weight in troy ounces and decimals of an ounce 1.000 fine is ascertained from the value by Table VI in the same manner as given for Table I.

Example: \$12,418.24.

Weight of \$12,000
$$\pm$$
 ozs. 9,281.25
" " 418 \pm 323.30
" " .24 \pm .18
Answer, \pm 9,604.73 ounces.

ARITHMETICAL METHODS.

By Multiplication and Division.—As a standard dollar contains 371.25 grains of pure silver, the latter will weigh in ounces troy 1.000 fine, $\frac{371.25}{480}$ $=\frac{99}{128}$. Hence, to find the weight in ounces and decimals of an ounce, multiply the number of dollars by 99 and divide by 128.

Note.—Subtract one hundredth of the number from itself, moving the decimal point two places to the right, and divide the remainder by 8, the quotient by 4 and that quotient by 4.

Example: \$12,418.24 1241824 8) 1,229,405.76 4) 153,675.72 4) 38,418.93 9,604 73 ounces.

By Multiplication.—As $_{128}^{99} \equiv$ decimal .7734375, multiply the value by the decimal .7734375.

Example: \$12,418.24.

 $12,418.24 \times .7734375 = 9,604.73$

By Division and Subtraction.—As the weight of the pure silver contained is $\frac{9}{10}$ of the weight of a silver dollar, the weight in ounces 1.000 fine may be found, from the value, by taking $\frac{9}{10}$ of the value and subtracting $\frac{1}{8}$ and $\frac{1}{8}$ of $\frac{1}{8}$ therefrom, as directed under VII.

VII.

To find the weight in troy ounces .900 fine contained in a given value of silver, computed at the silver dollar coining rate.

BY TABLE VII.

The weight in ounces and decimals of an ounce .900 fine of a given value of silver, estimated at the United States silver dollar coining rate, is found by Table VII in the same manner as the weight of gold .900 fine is found by Table II.

Example: The weight of \$586,965.35 is

$$\$586,000 = \text{ozs. } 503,593.75$$
 $.965 = 829.30$
 $.35 = .30$

$$504,423.35$$

ARITHMETICAL METHODS.

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By Multiplication and Division.—As a dollar contains 412.5 grains of silver .900 fine, its weight is $\frac{412.5}{480} \equiv \frac{55}{64}$ of an ounce. Hence the weight it troy ounces .900 fine of a given value of silved dollars can be found by multiplying the number expressing the value by 55 and dividing by 64.

Note.—If preferred, instead of dividing by 6 divide by 8, and the quotient by 8.

Example: The weight of \$586,965.35 is

586,965.35	
55	
293482675	
293482675	
8)32,283,094.25	8
8) 4,035,386.78	8
504,423.35 ounces.	

By Multiplication.—As $\frac{55}{64}$ = decimal .859375, multiply the number expressing the value by the decimal .859375; the product will be the weight in ounces and decimals of an ounce.

Example: The weight of \$586,965.35 is $586,965.35 \times .859375 = 504,423.35$ ounces.

By Division and Subtraction.—As $\frac{55}{64} = \frac{64}{64} - \frac{8}{64} - \frac{1}{64} = \frac{1}{64} = \frac{1}{8} - \frac{1}{8}$ of $\frac{1}{8}$, subtract from the number exdressing the value $\frac{1}{8}$ and $\frac{1}{8}$ of $\frac{1}{8}$ of itself; this will give the weight in troy ounces .900 fine.

Example: The weight of \$586,965.35 is

8)	73,370.6
	9,171 33
	82,542.0022

VIII.

To find the value at the coinage rate (United States silver dollar) of silver 1.000 fine.

BY TABLE VIII.

The values are given for thousand ounces in dollars and cents. The number of thousand ounces from 1 to 99 is entered in the marginal column under "Weight," and its value is stated opposite to it in the first column headed 0.

If the number consists of hundreds as well as units and tens of thousands of ounces, the value will be found under the proper "hundred" column

Table I.---WEIGHT in Troy Ounces of GOLD 1,000 fine, per \$1,000 value.

VV	Thous dolls.	0	100	200	1 000	1	or gord	1,000 line,	per \$1,00	value.		
Ų	0	Ounces, Pee	Ounces. Dec.	Ounces. Dec.	Ounces. Dec.	Ounces. Dec.	500	600	700	800	900	Thodoll
	1 2 3 4 5 6 6 7 8 9 10 11 12	48, 375 96, 750 115, 125 193, 500 241, 875 290, 250 338, 625 387, 000 435, 375 483, 750 532, 125 580, 500	4 837, 500 4 885, 875 4 934, 250 4 982, 625 5 031, 000 5 079, 375 5 127, 750 5 176, 125 5 224, 500 5 272, 875 5 369, 625	9 675, 000 9 723, 375 9 771, 750 9 820, 125 9 868, 500 9 916, 875 9 965, 250 10 013, 625 10 062, 000 10 110, 375 10 158, 750 10 207, 125	14 512, 500 14 560, 875 14 609, 250 14 657, 625 14 706, 000 14 754, 375 14 802, 750 14 851, 125 14 899, 500 14 947, 875	19 350, 000 19 398, 375 19 446, 750 19 495, 125 19 543, 500 19 591, 875 19 640, 250 19 683, 625 19 737, 000 19 785, 375 19 833, 750	Onnces. Dec 24 187, 500 24 235, 875 24 284, 250 24 332, 625 24 381, 000 24 429, 375 24 477, 750 24 526, 125 24 574, 500 24 622, 875 24 671, 250	29 025, 000 29 073, 375 29 121, 750 29 170, 125 29 218, 500 29 266, 875 29 315, 250 29 363, 625 29 412, 000 29 460, 375 29 508, 750	Ounces. Dec 33 862,500 33 910,875 33 959,250 34 007,625 34 056,000 34 104,375 34 152,750 34 201, 125 34 249,500 34 297,875	Ounces, Dec 38 700,000 38 748,375 38 796,750 38 845,125 38 893,500 38 941,875 38 990,250 39 087,000 39 135,375	43 537, 500 43 585, 875 43 634, 250 43 682, 625 43 731, 000 43 779, 375 43 827, 750 43 876, 125 43 924, 500 43 972, 875	4 5 6 7 8 9
30 30 30 30 30 30 30 30 30 30 30 30 30 3	13 14 15 16 17 18 19 20 21	628, 875 677, 250 725, 625 774, 000 822, 375 870, 750 919, 125 967, 500 1 015, 875	5 708, 250 5 756, 625 5 805, 000	10 400, 625 10 449, 000 10 497, 375 10 545, 750 10 594, 125 10 642, 500	15 141, 375 15 189, 750 15 238, 125 15 286, 500 15 334, 875 15 383, 250 15 431, 625 15 480, 000	19 930, 500 19 978, 875 20 977, 250 20 975, 625 20 124, 000 20 172, 375 20 220, 750 20 269, 125	25 106, 625	29 750, 625 29 799, 000 29 847, 375 29 895, 750 29 944, 125	34 394. 625 34 443. 000 34 491. 375 34 539. 750 34 588. 125 34 636. 500 34 684. 875 34 733. 250 34 781. 625	39 232, 125 39 280, 500 39 328, 875 39 377, 250 39 425, 625 39 474, 000 39 522, 375 39 570, 750 39 619, 125	44 021, 250 44 069, 625 44 118, 000 44 166, 375 44 214, 750 44 263, 125 44 311, 500 44 359, 875 44 408, 250 44 456, 625	11 12 13 14 15 16 17 18
- Andrews	22 23 24 25 26 27 28 29 30	1 064, 250 1 112, 625 1 161, 000 1 209, 375 1 257, 750 1 306, 125 1 354, 500 1 402, 875 1 451, 250 1 499, 625	5 901,750 5 950,125 5 998,500 6 046,875 6 095,250 6 143,625 6 192,000 6 240,375 1 6 288,750	10 739, 250 1 10 787, 625 1 10 836, 000 1 10 884, 375 1 0 932, 750 1 1 029, 500 1 1 077, 875 1 1 126, 250 1	15 576, 750 2 15 625, 125 2 15 625, 125 2 15 673, 500 2 15 721, 875 2 15 770, 250 2 15 818, 625 2 15 867, 000 2 15 915, 375 2	20 414, 250 4 20 414, 250 5 0 462, 625 5 0 511, 000 5 0 559, 375 2 0 607, 750 2 0 656, 125 2 0 704, 500 2 0 752, 875 2	25 203, 375 25 251, 750 25 300, 125 25 348, 500 25 396, 875 25 445, 250 25 493, 625 25 542, 000 25 590, 375	30 040, 875 30 089, 250 30 137, 625 30 186, 000 30 234, 375 30 282, 750 30 331, 125 30 379, 500 30 427, 875 3	55 168, 625 35 217, 000 35 265, 375		44 505, 000 44 553, 375 44 601, 750 44 650, 125 44 698, 500 44 746, 875 44 795, 250 44 843, 625 44 892, 000 44 940, 375	20 21 22 23 24 25 20 27 28
	32 33 34 35 36 37 38 39	1 548,000 1 596,375 1 644,750 1 693,125 1 741,500 1 789,875 1 838,250 1 886,625	6 433, 875 6 482, 250 6 530, 625 6 579, 000 116 627, 375 6 675, 750 6 724, 125 117 6 772, 500	1 174, 625 1 223, 000 1 271, 375 1 319, 750 1 368, 125 1 416, 500 464, 875 513, 250 561, 625 1 16	6 012. 125 20 6 060. 500 20 5 108. 875 20 6 1205. 625 21 5 254. 000 21 302. 375 21 350. 750 21 399. 125 21	849, 625	5 687, 125 3 5 735, 500 3 5 783, 875 3 5 880, 625 3 5 929, 000 3 6 927, 375 3 6 025, 750 3 6 074, 125 3	30 524, 625 3 30 573, 000 3 30 621, 375 3 0 669, 750 3 0 718, 125 3 0 766, 500 3 0 814, 875 3 0 863, 250 3	5 313, 750 5 362, 125 5 410, 500 5 458, 875 5 507, 250 5 555, 625 6 604, 000 5 652, 375 6 700, 750	40 151, 250 40 199, 625 40 248, 000 40 296, 375 40 344, 750 40 393, 125 40 441, 500 40 489, 875 40 538, 250 40 500 40 500 40 500 40 600 40 600 4	44 958, 750 45 037, 125 45 037, 125 608, 500 45 133, 875 45 182, 250 45 230, 625 45 230, 625 45 327, 375 45 327, 375 45 375, 750	30 31 32 33 34 35 36 37 38
	42 43 44 44 45 46 47 2 48 2 49 2	1 983, 375 2 031, 750 2 080, 125 2 128, 500 2 176, 875 7 2 225, 250 7 273, 625 7 322, 000 7 370, 375	6 820, 875 11 6 869, 250 11 6 917, 625 11 6 966, 000 11 7 014, 375 11 111, 125 11 159, 500 11 207, 875 12	658. 375 16 706. 750 16 755, 125 16 803. 500 16 851. 875 16 900. 25.0 16 948. 625 16 997. 000 16 045. 375 16	495. F75 21 544. 250 21 592. 625 21 641. 000 21 689. 375 21 737. 750 21 786. 125 21 834. 500 21 882. 875 21	335, 375 26 381, 750 26 430, 125 26 478, 500 26 526, 875 26 675, 250 26 623, 625 26 672, 000 26	122,500 30 170,875 31 219,250 31 267,625 31 316,000 31 364,375 31 412,750 31 461,125 31 509,500 31	960,000 35 108,375 35 1056,750 35 105,125 35 153,500 36 201,875 36 250,250 36 298,625 36 347,000 36	797,500 845,875 891,250 942,625 491,000 039,375 4087,750 136,125 4184,500	10 635,000 4 0 683,375 4 0 731,750 4 0 780,125 4 0 828,500 4 0 876,875 4 0 925,250 4 0 973,625 4 1 022,000 4	15 472, 500 5 520, 875 5 569, 250 5 667, 625 5 666, 000 6 714, 375 6 762, 750 4 4 6 811, 125	39 41 42 43 44 45 46 47 48
	51 2 52 2 53 2 54 2 55 2 56 2 57 2 58 2 59 2	467. 125 7 515. 500 7 563. 875 7 612. 250 7 660. 625 7 709. 000 7 757. 375 7 805. 750 8 854. 125 7	304. 625	142, 125 190, 500 17 2238, 875 17 2287, 250 17 335, 625 17 384, 000 17 432, 375 17 180, 750 17	931, 250 21 979, 625 21 028, 000 21 076, 375 21 124, 750 21 173, 125 22 021, 500 22 0269, 875 22 1818, 250 22 1	768, 750 26 817, 125 26 865, 500 26 913, 875 26 962, 250 26 1010, 625 26 107, 375 26 107,	606, 250 31 654, 625 31 703, 000 31 751, 375 31 799, 750 31 848, 125 31 848, 125 31 944, 875 31	443, 750 36 492, 125 36 540, 500 36 588, 875 36 637, 250 36 685, 625 36 734, 000 36 782, 375 36	281, 250 329, 625 378, 000 41 426, 375 474, 750 41 523, 125 41 571, 500 41 619, 875 41	1 1/8, 750 1 1/8, 750 1 167, 125 215, 500 263, 875 312, 250 360, 625 409, 000 457, 375	5 907, 875 4 5 956, 250 6 956, 250 6 004, 625 6 053, 000 6 101, 375 149, 750 198, 125 246, 500 294, 875 57	49 50 51 52 53 64 56 67
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	22	0 22 74	0 45 48	0 68 22	0 90 96	1 13 70	22	1 36 43	1 59 17	1 81 91	2 04 65	2 27 39	22
	23	0 23 77	0 47 55	0 71 32	0 95 09	1 18 86	23	1 42 64	1 66 41	1 90 18	2 13 95	2 37 73	23
	24	0 24 81	0 49 61	0 74 42	0 99 22	1 24 03	24	1 48 84	1 73 64	1 98 45	2 23 26	2 48 06	24
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	27	0 27 91	0 55 81	0 83 72	1 11 63	1 39 53	27	1 67 44	1 95 35	2 23 26	2 51 16	2 79 07	27
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	58	0 59 95	1 19 90	1 79 84	2 39 79	2 99 74	58	3 59 69	4 19 64	4 79 59	5 30 23	5 99 48	58
	59	0 60 98	1 21 96	1 82 95	2 43 93	3 04 91	59	3 65 89	4 26 87	4 87 86	5 48 84	6 09 82	59
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	61	0 63 05	1 26 10	1 89 15	2 52 20	3 15 25	61	3 78 29	4 41 34	5 04 39	5 67 44	6 30 49	61
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	63	0 65 12	1 30 23	1 95 35	2 60 47	3 25 58	63	3 90 70	4 55 81	5 20 93	5 86 05	6 51 16	63
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	75	0 77 52	1 55 04	2 32 56	3 10 08	3 87 60	75	4 65 12	5 42 64	6 20 16	6 97 67	7 75 19	75
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	94	0 97 16	1 94 32	2 91 47	3 88 63	4 85 79	94	5 82 95	6 80 10	7 77 26	8 74 42	9 71 58	94
	95	0 98 19	1 96 38	2 94 57	3 92 76	4 90 96	95	5 89 15	6 87 34	7 85 53	8 83 72	9 81 91	95
	96	0 99 22	1 93 45	2 97 67	3 96 90	4 96 12	96	5 95 35	6 94 57	7 93 80	8 93 02	9 92 25	96
	97	1 00 26	2 00 52	3 00 78	4 01 03	5 01 29	97	6 01 55	7 01 81	8 02 07	9 02 33	10 02 58	97
	98	1 01 29	2 02 58	3 03 88	4 05 17	5 06 46	98	6 07 75	7 09 04	8 10 34	9 11 63	10 12 92	98
	99	1 02 33	2 04 65	3 06 98	4 09 30	5 11 63	99	6 13 95	7 16 28	8 18 60	9 20 93	10 23 26	99
	10, 000	10, 335. 92	20. 671. 83	31, 007. 75	41, 343. 67	51, 679. 59		62, 015. 50	72, 351. 42	82, 687. 34	93, 023. 26	103, 359, 17	10, 000
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100 ozs.	.0051	.006	.0061	.007	.007	100 ozs.		.0081	.009	.0091	.010	100 ozs.
10 11 12 13 14 15 16 17 18 19	Dolls. Cts 1 13 70 1 25 06 1 36 43 1 47 80 1 59 17 1 70 54 1 81 91 1 93 28 2 04 65 2 16 02	. Dolls. Cts. 1 24 03 1 36 43 1 48 84 1 61 24 1 73 64 1 86 05 1 98 45 2 10 85 2 23 26 2 35 66	Dolls. Cts. 1 34 37 1 47 80 1 61 24 1 74 68 1 88 11 2 01 55 2 14 99 2 28 42 2 41 86 2 55 30	Dolls. Cts 1 44 70 1 59 17 1 73 64 1 88 11 2 02 58 2 17 05 2 31 52 2 45 99 2 60 47 2 74 94	1 55 04 1 70 54	1 10 1 11 1 12 1 13 1 14 1 15 1 16 1 17 1 18	Dolls. Cts 1 65 37 1 81 91 1 98 45 2 14 99 2 31 52 2 48 06 2 64 60 2 81 14 2 97 67 3 14 21	Dolls. Cts. 1 75 71 1 93 28 2 10 85 2 28 42 2 45 99 2 63 57 2 81 14 2 98 71 3 16 28 3 33 85	Dolls. Cts. 1 86 05 2 04 65 2 23 26 2 41 86 2 60 47 2 79 07 2 97 67 3 16 28 3 34 88 3 53 49	Dolls. Cts 1 96 38 2 16 02 2 35 66 2 55 30 2 74 94 2 94 57 3 14 21 3 33 85 3 53 49 3 73 13	Dolls. Ct 2 06 7x 2 27 30 2 48 06 2 68 73 2 89 41 3 10 06 3 30 75 3 51 48 3 72 09 3 92 76	2 10 11 12 13 14 14 15 16 16 17 18
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	.0051	.006	.0061	.007	.0071		.008	.0081	.009	.009	.010	